(The reason for reducing HP and Subs by an additional 1% was to try to avoid the artificial occurrences of HP equaling [MSO HHs]. It is still an "artificial" number, and one of the reasons HP and HNP need to be compared to [Total HHs] and not just [MSO HHs], as will be described below.)

There were 548 of the 1,887 counties with MSO data that needed to have their HP (and Subs) adjusted down, with the differences between HP and [MSO HHs] ranging from 1% to 87% of the original value of HP.

Computing Projections

The final stage was to determine how to project the number of HP and Subs for an entire county based on the representation of MSO data in that county.

NOTE: For this version of the report, Subs were not projected for any of the counties. Some of the MSOs provided us with HP and Subs, while others provided just Subs and others provided just HP. This has to be taken into account to accurately project Subs, and will require additional analysis.

1. Determine Usable MSO Data

First we determined those counties with MSO data that were "usable". In analyzing the data and testing the report, we discovered a number of situations where the number of HP was unrealistically low compared to [MSO HHs]. A, B and C counties were excluded from calculating projections where

> (Adj HP] < 10), and
> ((([Adj HP] / [MSO HHs]) >= 0.1%)

D counties were excluded from calculating projections where

> (Adj HP] < 10), and
> ((([Adj HP] / [MSO HHs]) >= 0.1%), and
> ([MSO HHs] was > 1,000)

This allowed us to eliminate abnormally low numbers of [Adj HP] vis-à-vis [MSO HHs], but still keep those counties with low [MSO HHs] in the "pool" of counties used to compute the projections. This resulted in the exclusion of 51 counties with the following distribution by CountySize:

> CountySize "A" – 5 out of 138
> CountySize "B" – 17 out of 317
> CountySize "C" – 10 out of 314
> CountySize "D" – 19 out of 1,118

Then, based on testing the results of the report, counties where [Adj HP] only represented less than 15% of [MSO HHs] were excluded from calculating projections. We felt that this eliminated those situations where we did not have enough valid MSO data to make an accurate prediction of actual cable presence in a county. This resulted in the exclusion of 180 counties with the following distribution by CountySize:

> CountySize "A" – 15 out of 133 remaining
> CountySize "B" – 52 out of 300 remaining
> CountySize "C" – 32 out of 304 remaining
> CountySize "D" – 81 out of 1,099 remaining

Finally, counties were evaluated based on their CountySize and the ratio of [MSO HHs] to [Total HHs], to further identify those counties that we felt did not have enough valid MSO data to make an accurate prediction of actual cable presence in a county. A county was excluded from calculating projections if:

> CountySize = "A" and (([MSO HHs] / [Total HHs]) < 20%)
> CountySize = "B" and (([MSO HHs] / [Total HHs]) < 10%), OR
> CountySize = "B" and (([MSO HHs] / [Total HHs]) >= 10% and < 20%) and
>   (([Adj HP] / [MSO HHs]) < 75%)
> CountySize = "C" and (([MSO HHs] / [Total HHs]) < 7.5%)
> CountySize = "D" and ([MSO HHs] < 1,000) and ([Total HHs] > 10,000)

This resulted in the exclusion of 72 counties with the following distribution by CountySize:

> CountySize "A" – 13 out of 118 remaining
> CountySize "B" – 30 out of 248 remaining
> CountySize "C" – 16 out of 272 remaining
> CountySize "D" – 13 out of 1,018 remaining

What remained was a pool of usable counties with the following distribution by CountySize:

> CountySize "A" – 105 remaining out of original 138, or 76.1%
> CountySize "B" – 218 remaining out of original 317, or 68.8%
> CountySize "C" – 256 remaining out of original 314, or 81.5%
> CountySize "D" – 1,005 remaining out of original 1,118, or 89.9%

For a total of 1,584 counties with usable MSO data out of the original 1,887 counties derived from ZIPs with MSO data; or 83.9% of the original pool of MSO counties in the final pool of MSO counties to be used in calculating projections for all other counties without MSO data.

BIGPIPE

2. Determine Ratio of MSO HHs to Total HHs

Next we determined the ratio of [MSO HHs] to [Total HHs]:

HHs% = ([MSO HHs] / [Total HHs])

This gave us the basis for computing the projected number of HP in those counties where usable MSO data existed.

3. Determine Projected HP, Subs and HNP for Each County w/ Useable MSO Data

The final data for these counties included:

- [Total HHs]
- [MSO HHs]
- [HP of MSO HHs] – The actual number of [Adj HP] for that county from the MSO data
- [HP of Total HHs] – The projected number of HP for that county, where
    o [HP of Total HHs] = ([Adj HP] / [HHs%]), or in other words
        ▪ [HP of Total HHs] = ([Adj HP] / ([MSO HHs] / [Total HHs]))
- [HP to HHs%] – The ratio of [HP of MSO HHs] to [MSO HHs], or
    o [HP to HHs%] = ([HP of MSO HHs] / [MSO HHs])

From these results the values for Homes Not Passed were calculated as:
- [NP of MSO HHs] – The actual number of homes not passed for that county from the MSO data, calculated as
    o [NP of MSO HHs] = ([MSO HHs] – [HP of MSO HHs])
- [NP of Total HHs] – The projected number of homes not passed for that county, calculated as
    o [NP of Total HHs] = ([Total HHs] – [HP of Total HHs])

At this point all the counties that had MSO data available and usable had their total projected HP and HNP calculated.

4. Determine Projections of Counties w/out MSO Data Based on Region, State and County Size of Counties That Do

We then had to go through an iterative process to compute the proper ratios for projecting [HP of MSO HHs], [HP of Total HHs], [NP of MSO HHs] and [NP of Total HHs] for the other counties of the same size in the same state and the same region that did not have any MSO data available, or whose MSO data was deemed unusable. To do this, we used the counties that did have useable MSO data and aggregated the [MSO HHs], [Total HHs] and [Adj HP], by Region, State and CountySize, then computed the following "multipliers" for each combination of Region, State and CountySize:

- [MSO HHs to Total HHs%] = ((sum([MSO HHs])) / (sum([Total HHs])))